



**CALIFORNIA STATE SCIENCE FAIR  
2010 PROJECT SUMMARY**

<b>Name(s)</b> Yesmeen W. Shindy	<b>Project Number</b> <b>J2129</b>
<b>Project Title</b> <b>Meat Keeper</b>	
<p style="text-align: center;"><b>Abstract</b></p> <p><b>Objectives/Goals</b> My objective was to see whether salt, cumin, or lemon juice preserved meat the longest.</p> <p><b>Methods/Materials</b> Some materials I used were, Precision food scale, 16 ice cube trays, three pounds of beef for stew meat, and four large Styrofoam iceboxes. I kept each piece of meat in a ice cube tray(categorized by the different preservative) to avoid cross contamination. I, then placed all the ice cube trays in iceboxes. The iceboxes were room temperature which was 20 degrees Celsius. I kept the iceboxes consistantly at room teperature so I could get the same results and to speed up the process of meat decay, due to the fact of time constraints. Everyday, I would check the meat at 7:00 A.M. and 7:00 P.M. After all of the meat went bad, I came up with my results.</p> <p><b>Results</b> In my results I found that salt did the best. Salt lasted ten days, cumin lasted six days, lemon juice lasted four days, and control lasted two days. This is because salt inhibits the growth of bacteria and mold, while cumin and lemon juice don't. Salt, also did the best because it drew water out of the meat through osmosis (which is the balancing out of water)and for there to be any bacteria or mold there has to be moisture and there was not alot of moisture after the salt.</p> <p><b>Conclusions/Discussion</b> My question was, "what is the best natural meat preservative:salt, lenon juice or cumin?" My hypothesis was that salt would be the best preservative. My hypothesis was correct because the salted meat lasted the longest. It was the last preservative to remain untouched. The relevance of my experiment to everyday life is that, if you have frozen meat on your counter that you need to thaw overnight sprinkle some salt on top so no bacteria or mold start to grow on it. One problem I did have were time constraints. I did not have the full amount of time to conduct my experiment, to fix this problem I placed the meat in Styrofoam iceboxes at room temperature so that the meat rotted faster. Another problem was when the meat would go bad, I could only tell this by looking at it or smelling it. I understood from the beginning that smelling or visually insepecting the meat would be subjective and hard to prove. This project was very fun and educational. Even when I hit bumps in the road it was a good experience.</p>	
<b>Summary Statement</b> My project is about would salt, lemon juice, or cumin preserve the meat the best.	
<b>Help Received</b> Parents bought materials for project, Teacher guided in paper	